

**Contractors on the Battlefield:
Has the Military Accepted too much Risk?**

**A Monograph
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Abstract

CONTRACTORS ON THE BATTLEFIELD: HAS THE MILITARY ACCEPTED TOO MUCH RISK? By Major Christopher D. Croft, U.S. Army, 50 pages

Contracting for services is not new. Throughout the history of warfare, armies used the services of non-military personnel or civilians to accomplish logistical functions to maintain the force and support combat operations. Colonial forces in the Revolutionary war relied on contracted teamsters for services at Valley Forge. United States forces have continued to rely on contractors to provide support from the Revolutionary War to the Gulf War. In Bosnia, contractors provided fifty-two types of support – from LifeCycle® treadmills to helicopter maintenance by Bell and Boeing.

Continued budgetary pressure, however, will force the military to further outsource services to industry. The logistics focus is not merely the amassing and storage of material and equipment, but ultimately the timely and balanced arrival of resources to the forces in need. Using responsiveness, flexibility, and economy as criteria to determine the level of risk; this paper answers if the United States Army's theater services contracting path presents unacceptable risk to successful operations.

The author argues that the United States military (specifically the Army) due to budgetary pressure, has accepted an unreasonable risk with its policy towards contractors on the battlefield. The recommendations include numerous methods to mitigate risk. These recommendations include changes in leadership, planning, training and doctrine. Training and doctrine for contractors on the battlefield form the framework for the leadership through anticipatory planning to develop "habitual relationships" between contractor and soldier, solidifying the bond ensuring successful mission accomplishment.

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Introduction

Contractors are no longer restricted to acquisition and logistics but are found nearly everywhere—and their presence on the battlefield is a reality.¹

LtCol Lourdes Castillo

The sky is black with clouds caused by the burning of oil. The land is desolate as far as the eye can see. Four men, two in each vehicle are driving without lights deep into Iraq hoping not to run into inhabitants. Their vehicles were loaded with all kinds of diagnostic sensor devices to determine the presence of biological and chemical agents. With the ground offensive a few days away, the function these men were performing was vital to the overall campaign. The men, behind enemy lines, were running a great risk to themselves and the success of the impending ground operation. If the Iraqi's captured these men, their status under the Hague – Geneva Convention was in grave question. Grave because they were contractors, not soldiers of United States military.²

Contracting for services is not new. Throughout the history of warfare, armies used the services of non-military personnel or civilians to accomplish logistical functions to maintain the force and support combat operations. Colonial forces in the Revolutionary war relied on contracted teamsters for services at Valley Forge.³ United

¹ Lourdes A. Castillo, LtCol, USAF, *Waging War with Civilians: Asking the Unanswered Questions*, Fall 2000 [Internet] (Air Chronicles, 2000, accessed April 6, 2001); available from <http://www.airpower.maxwell.af.mil/airchronicles/apj/apj00/fal00/castillo.htm>.

² Story relayed by Mr. Joe Fortner, Logistics Management Specialist at the U.S. Army Combined Arms Support Command (CASCOT). Mr. Fortner discovered this information during a review of contractor actions on the battlefield in Southwest Asia (SWA).

³ Joe A. Fortner and Ron Jaeckle, "Institutionalizing Contractors on the Battlefield," *Army Logistician* 2000, 1.

States forces have continued to rely on contractors to provide support from the Revolutionary War to the Gulf War. More recently, in Bosnia, contractors provided fifty-two types of support – from LifeCycle® treadmills to helicopter maintenance by Bell and Boeing.⁴

Technological advances have brought about a Revolution in Military Affairs (RMA), resulting in increased complexity of systems that the United States Army utilizes in the conduct of war. These systems require greater technical competency to maintain and support. According to Jim Ruma, Director of Logistics Operations at General Dynamics Land Systems, “the equipment is more complex, but [the Army does not] have the stable [maintenance] force.”⁵ The choices are simple according to Ron Laurenzo who wrote for Defense Week, April 5, 1999 issue, that the Army “either uses more contractors to maintain high-tech systems or pay soldiers more so they stay in the service long enough to become master technicians, which can take ten to fifteen years for some systems.”⁶

The RMA and technological improvements have presented the Department of Defense (DoD) and Services with many challenges. None of these is more important than determining ‘what are the logistical core competencies.’ The United States Army Combined Arms and Support Command (CASCOM) as the executive agency for the Office of the Deputy Chief of Staff for Logistics (ODCSLOG) and Department of the Army (DA) for Contractors on the Battlefield (CoB) is attempting to answer this question

⁴ Laurenzo, 4.

⁵ Major James E. Althouse, "Contractors on the Battlefield: What Doctrine Says, and Doesn't Say," *Army Logistician*, November - December 1998, 5.

⁶ Laurenzo, 3.

and many others.⁷ Their goal is to alleviate confusion and burdens on Army commanders and units at the operational and tactical level during operational situations.

Title 10, United States Code (USC), Section 2464, requires the Secretary of Defense (SECDEF) to identify core logistics capabilities “[which] shall include capabilities that are necessary to maintain and repair the weapons systems and other military equipment...identified by the SECDEF...as necessary to enable the armed forces to fulfill the strategic and contingency plans prepared by the Chairman JCS (Joint Chiefs of Staff).”⁸ This law states that “it is essential for the national defense that the Department of Defense maintain a core logistics capability that is Government owned and Government operated.” However, today it is an accepted practice to contract for the maintenance of weapons systems – core capabilities according to this law. Some lawmakers are concerned that the Army may “outsource” too many jobs, leaving it lacking some important capabilities in a time of crisis.⁹

The “ideal battlefield” would be free of non-combatants, because their absence, as well as many others, would greatly reduce the complexity of the coordination.¹⁰ Continued budgetary pressure, however, will force the military to outsource services to industry and drive it to consider imaginative ways of reducing overhead. The focus ultimately for logistics is not merely the amassing and storage of materials and

⁷ *Contractors on the Battlefield* [Internet] (Combined Arms Support Command (CASCOM), 2001, accessed April 4, 2001); available from <http://www.cascom.army.mil>.

⁸ *Title 10, USC, Section 2464, "Core Logistics Capabilities"* [Online] (January 23, 2000, accessed March 12, 2001); available from <http://uscode.house.gov/usc.htm>.

⁹ LTC Anderson, *Military Readiness, Defense Logistics Reengineering Initiatives* [Internet] (Department of the Army Office, Chief of Legislative Liaison, February 2000, accessed April 6, 2001); available from http://www.hqda.army.mil/ocll/Hearing_Summaries/06-27-2000_HASC_MIL_PERS_Defense_Logistics_Reengineering_Initiatives.htm.

¹⁰ Gordon L. Campbell, *Contractors on the Battlefield: The Ethics of Paying Civilians to Enter Harm's Way and Requiring Soldiers to Depend Upon Them* (Fort Lee: Joint Services Conference on Professional Ethics 2000), White Paper, 5.

equipment, but also the timely and balanced arrival of those resources to the forces in need. Using responsiveness, flexibility, and economy as criteria to determine the level of risk, this paper will answer whether due to severe budgetary pressures, has the United States Army embarked on a theater services contracting path that presents unacceptable risk to successful operations.

The introduction and chapter one provide background understanding for the use of contractors on the battlefield and why the focus is shifting to greater utilization. Chapter two provides an understanding of where we are today with issues pertaining to contractors on the battlefield. Chapter three examines three critical combat service support functions; responsiveness, flexibility, and economy, as the criteria for evaluation of the research question. Responsiveness is providing the right support in the right place at the right time and involves the ability to meet changing requirements on short notice and anticipating those requirements. Flexibility is the ability to adapt the CSS structures and procedures to the changing situations, missions, and concepts of operations. Economy is providing the most efficient support at the least cost to accomplish the mission. The chapter ends with an analysis of the current use of contractors against these criterion and the associated risks, the research examines if contractors on the battlefield provide greater capability to our forces or are they an anchor to military operations. Chapter four summarizes the analysis from the previous chapter and provides conclusions and recommendations for future military operations

Chapter 1 - Background

In total war, it is quite impossible to draw any precise line between military and non-military problems.

Winston Churchill¹¹

In ancient times, there was no attempt to identify those who were combatants and those who were not. When war was declared, the entire population participated in the conduct of the war. The Israeli's organized the men of the twelve tribes into an army to attack and conquer the city of Jericho.¹² The others remained behind to establish supply stores. Over time, warfare transformed into the "concept of professional armies" and a distinction developed between the soldier and the non-soldier or non-combatant.¹³ For the United States, contractors played a major role in every operation since the Revolutionary War (see Table 1). While the ratio changes from 1:2 to 1:7, the fact remains that civilians play a significant role in United States operations.

War Conflict	Civilians	Military	Ratio
Revolutionary	1,500 (est)	9,000	1:6 (est)
Mexican / American	6,000 (est)	33,000	1:6 (est)
Civil War	200,000	1,000,000	1:5
World War I	85,000	2,000,000	1:2
World War II	734,000	5,400,000	1:7
Korean Conflict	156,000	393,000	1:2.5
Vietnam Conflict	70,000	359,000	1:6
Gulf War	14,400	541,000	1:3.8

Table 1. Civilian Contractor Involvement¹⁴

¹¹ QuoteGallery, *Quote Gallery* [Internet] (January 1, 2001, accessed May 2, 2001); available from www.quotegallery.com.

¹² Joshua, chapter 1-6, NIV (New International Version), Holy Bible.

¹³ Col Steven J. Zamparelli, "Contractors on the Battlefield: What Have We Signed up For?," *Air Force Journal of Logistics*, Fall 1999, 16.

¹⁴ Ibid.

Before proceeding, it is important to understand the contract and its concept of support to the commander. A contract is a “legally enforceable agreement between two or more parties for the exchange of goods or services; it is the vehicle through which the military details the requirements that it wants a contractor to accomplish and what will be provided in return.”¹⁵ The type of contract for the focus here is the systems contract – especially for use with the system contractor. A system contract is associated with the purchase of a weapon system like the M1A2 or the Patriot Missile Defense System. These contracts are designed to provide maintenance support for high-tech weapon systems where the cost for the military to maintain the personnel for the repair and upkeep of these systems is not economically feasible in a resource-constrained environment. Initially, the United States Code (USC) restricted this type of contractual support to one year and then to four years. Now it allows for system contract support for the life cycle of the system. When the support for these systems was short, the number of issues associated with employing contractors was limited. Since the increased presence of contractors on the battlefield, field commanders are now dealing with many issues specifically focused on these contractor personnel and their role in the operation.

In the Revolutionary War, General Washington used contractors to provide medical services, carpentry services, architectural products, engineering projects, drive wagons, and forage supplies.¹⁶ It was important to use contractors to provide the logistical tasks so that the limited number of soldiers could be employed to fight the

¹⁵ U.S. Army, *Field Manual 100-21, Contractors on the Battlefield* (Washington, D.C.: Headquarters, Department of the Army, March 2000), 1-1.

¹⁶ Major William W. Epley, *Contracting in War: Civilian Combat Support of Fielded Armies* (Washington, DC: US Army Center of Military History, 1989), 1-6.

British.¹⁷ Civil War contractors provided many of the same functions as those in the revolutionary war – transportation, supply and medical. The Civil War also produced the first woman to receive the Medal of Honor – Dr. Mary Edwards Walker. Dr. Walker, a contractor on the battlefield, served with the Union Army as a “Contract Assistant Surgeon” working on or near the front lines trying to save as many lives, Union and Confederate, as possible. After the war, General William T. Sherman recommended her for receipt of the nation’s highest award.¹⁸

In the Korean War, contractors provided stevedoring, maintenance and transportation services. By Vietnam, contractors were becoming a major part of logistical capabilities within zones of operation providing construction, base operations, water and ground transportation, petroleum supply and maintenance/technical support for high-technology systems.¹⁹ In the Gulf War, there were some 9,200 contractor employees deployed in support of 541,000 United States forces providing maintenance for high-tech equipment in addition to water, food, construction and other services.²⁰ Contract personnel even moved into forward areas inside Iraq and Kuwait with combat forces.²¹

The military operational tempo (OPTEMPO) increased over three hundred percent over the last ten years.²² The requirement for contractor support of military operations increased similarly. During Operation Just Cause, eight-two contractors

¹⁷ James A. Huston, *The Sinews of War: Army Logistics 1775-1953*, 1st ed., Army Historical Series (Washington, DC: Center of Military History, 1966), 38.

¹⁸ Fortner and Jaeckle, 6.

¹⁹ Campbell, 2.

²⁰ Dr. Charles R. Shrader, *Contractors on the Battlefield*, Landpower Essay Series, vol. No. 99-6 (Association of the United States Army, May 1999), 2.

²¹ Eric A. Orsini and Lt Col Gary T. Bubnitz, "Contractors on the Battlefield: Risks on the Road Ahead?," *Army Logistician* 31, 131.

²² Gen Charles T. Robertson, "Global Mobility: The Keystone to America's Defense Strategy," in *Rapid Global Mobility in the 21st Century* (Robins Air Force Base, Georgia: Center for International Strategy, Technology and Policy, Georgia Institute of Technology, 1999).

deployed to Panama to support aviation assets.²³ In fact, civilian contractors have quietly taken part in such recent and varied military-run operations as those in Somalia, Macedonia, and Rwanda. At one point in Bosnia, our Army uniform presence was 6,000--supported by 5,900 civilian contractors.²⁴

“Contractors accompany the military into war zones and even into battle—that is a foregone conclusion.”²⁵ Their support is no longer an adjunct, ad hoc add-on to supplement a capability – many times they are the only capability available. Contractor support is an essential part of our force projection capability and increasing in its importance.²⁶ In 2001, the budget for the DoD is down forty percent relative to where it was ten years ago.²⁷ For the Army, that equates to a reduction from one hundred and eleven combat brigades in 1989 to sixty-three today. During that same period, the United States Army deployed troops on thirty-six occasions compared to ten deployments during the forty years of the Cold War.²⁸ The Guard and Reserve have experienced similar reductions: 1.8 million soldiers in 1989 reduced to 876,000 today, while performing thirteen times the man-days of service a year they contributed previously.²⁹ Furthermore, DoD has cut over three hundred thousand of its civilians since 1989.³⁰ In view of these reductions, private industry now performs many tasks once completed by military members. At the tactical level, private industry seems to replace force structure, but at

²³ Zamparelli, 4.

²⁴ Campbell, 2.

²⁵ Castillo, 1.

²⁶ Campbell, 2.

²⁷ Patrick Strawbridge, "Military's Risks Rising, Joint Chiefs Chairman Tell Veterans," *Omaha World Herald*, August 5, 1999.

²⁸ Greg Seigle, "Peacekeeping Undermines U.S. Combat Readiness," *Jane's Defense Weekly*, July 28, 1999.

²⁹ Rowan Scarborough, "Full-Time Warriors," *American Legion Magazine*, August 1999.

³⁰ Zamparelli, 11.

the operational and strategic level it is only a piece of the logistical capabilities the United States has at its disposal.

Immense budgetary pressures from within and without the DoD demand more bang, for significantly fewer dollars. Military spending programs have undergone drastic cuts, funding for modernization has become increasingly competitive with other internal service programs, and military infrastructure and readiness have steadily declined since the previous decade. To solve these problems, Congress ordered DoD to develop ways of cutting costs without cutting services. In response, the military has had to turn to reengineering, competitive sourcing, and privatization of increasingly military functions.³¹ Although the amount of actual savings produced by privatizing support and logistics services is debatable, even the most conservative estimates indicate that DoD can save a significant amount of its total obligation authority by contracting out most of its support functions and a large part of its logistics manpower.³² According to General William Tuttle, United States Army, Retired, currently president of Logistics Management Institute based in Washington, D.C., “the Army can cut logistics costs by up to twenty percent by using civilian contractors.”³³

Current guidance relating to logistics support contracting is, at best, ambiguous. The perception is that the efforts of all the parties involved are highly disorganized - each doing their own thing, subject only to their own interpretation of existing vague policy. According to the Office of Management and Budget (OMB) Circular A-76, revised 1999, activities ranging from motor pool operations, to aircraft maintenance, to satellite

³¹ Castillo, 3.

³² Ibid, 2.

³³ George Cahlink, "Contractors Win Kudos for Support in Kosovo Operation," *Federal Times*, September 27, 1999, 6.

tracking and data acquisition can be acquired through commercial sources. The circular provides exceptions for the government to perform core combat, combat support and combat service support function, but virtually any other task appears acceptable for outsourcing. The only hard exceptions are three functions that cannot be contracted – combat operations, command and control, and contracting.³⁴

Title 10, USC, Section 153(a), requires that the United States military retain core levels of all capabilities necessary to enable it to fulfill the strategic and contingency plans prepared by the Chairman of the Joint Chiefs of Staff. Within Title 10, the Secretary of Defense (SECDEF) must designate core functions of the military. In past years, DoD ensured that the bulk of its weapon-system expertise remained within the uniformed military. DoD Directive 1130.2, *Management and Control of Engineering and Technical Services*, required the military to quickly become proficient in maintaining and employing new systems, while limiting contractor support to just one year. Congress now allows contractor support of four years for new weapon systems and for the lifetime of non-critical systems.³⁵

As DoD continues to employ commercial practices, revolutionizing acquisition and sustainment processes, the reliance on contractor support for its weapon systems is rapidly increasing. Investing in the specialized training required to maintain these complex weapon systems is not “economical” for the military in peacetime. Defense and commercial contractors perform such an extensive role in support of the United States military equipment that many critical systems cannot operate without them. However,

³⁴ Office of Management and Budget (OMB), *Circular a-76, Performance of Commercial Activities* (Washington, D.C.: Office of Management and Budget, August 4, 1983 (Revised 1999)).

³⁵ Zamparelli, 15.

balancing these economies with the risks faced by battlefield commanders in the event contractors are not available to maintain deployed systems is critical.³⁶

Contractors are inextricably linked to the employment of forces; they augment force structure and provide capabilities the United States military is unable to provide due to severe budget restraints. The next chapter focuses specifically on the current state of contracting, the different types of contracts and contractors and the limitations on both the contract company and the United States Army. The chapter will lay the foundational understanding for the analysis of whether the United States military is assuming too much risk with increased contractors present on the battlefield.

³⁶ Major Kim M. Nelson, USAF, “Contractors on the Battlefield Force Multipliers or Force Dividers?” (Research, Air University, 2000), 2.

Chapter 2 – Present

*Forget logistics and you lose.*³⁷

General Frederick Franks, Jr.

Logistics provides the means to move the army to the fight, sustain them while in the fight, and bring the army home when it is all over. The United States military faces many challenges around the globe. These missions “cross the entire spectrum of crisis from humanitarian assistance to peace operations to high intensity conflict.”³⁸ Combining these mission requirements and the reductions discussed in the previous chapter, it becomes apparent that a significant gap in capability appears. Failure to fill the widening operational and strategic logistical gap may leave the tactical commander without critical capabilities. This chapter outlines where the army is today with contractors, the different types of contracts and contractors, and the issues associated with contractors on the battlefield, like contractor responsibilities, army responsibilities, contractor status, and force protection. Identification and resolution of these issues is paramount to the success of the ground tactical commander.

Logistical support differs at each level of war. At the strategic level, partnering with industry allows government and industry to maintain needed infrastructure capabilities and worker skills necessary to provide a massive amount of support the United States military requires in a time of war. By leveraging the commercial sector,

³⁷ Gen Frederick M. Franks, Jr., as quoted in Col Michael S. Williams and Lt Col Herman T. Palmer, USA, “Force-Projection Logistics,” *Military Review*, June 1994, 29.

³⁸ U.S. Department of Defense, *National Military Strategy of the United States of America* (Washington, D.C.: September 1997).

the military ensures that critical wartime skills and capabilities are maintained. This partnership can be a "win-win" situation for all involved.

At the operational level, the focus is no longer on industrial capabilities but on programs or contracts to fill the gap between the internal capabilities of the military and the requirements to support theater operations. The intent is to bridge strategic capabilities to meet the tactical commander's requirements. Contractual arrangements like the Logistics Civil Augmentation Program (LOGCAP) and other theater support contracts with organizations like Brown and Root Services Company (BRSC), provide the capability to support operations. Additionally, elements like the logistics support element (LSE) and logistical support unit (LSU) provide the linkage between the contracting organization and the theater level commander and the tactical commander. The operational level requires a mix of organic military personnel and contractors to support the operation.

At the tactical level, the mission is to achieve and sustain the level of readiness needed to support vital requirements. The tactical commander requires logistical support to arm, fix, fuel, man, move, and sustain the force. Military personnel provide the majority of tactical logistics support. The balance between military personnel and contractors on the battlefield varies based on METT-TC (Mission, Equipment, Time, Troops – Terrain and Civil Affairs). In operations other than war (OOTW) environment, where the threat level is lower, the use of contractors is more pronounced. In an environment like the Gulf War, contractors were limited to a rear theater sustainment mission. That is not to say contractors were not in harms way or near the front lines. The vignette at the beginning of this paper provided insight into what some contractors were

doing during this campaign. More recently, the United States Army employs contract support on several high-tech systems, like the Patriot Missile Defense System.

In today's strategic environment, the role of the United States military has changed from a stand-alone Cold War superpower to a multinational coalition partner. Much of the force structure is involved in joint military OOTW all over the world. This sheds new light on the use of contractors, as they may be called upon to support military missions and be subject to battlefield conditions during these "non-war" operations.³⁹ The Army is striving to further reduce its logistics infrastructure to make it consistent with force constraints. There will be continued interest throughout the DoD on privatization and outsourcing as a means of reducing costs.

Operations Joint Endeavor and Desert Storm indicate contracting and outsourcing may be effective Combat Service Support force multipliers. They can increase existing capabilities, provide new sources of supplies and services, and bridge gaps in the deployed force structure.⁴⁰ For example, contractors deployed to Israel as part of the deploying Patriot unit. The contractors mission was to maintain and repair the Patriot system – a functional capability not resident within the United States military today.

Full scale war and OOTW both require a force-projection logistical system that possesses "the demonstrated ability to rapidly alert, mobilize, deploy and operate anywhere in the world."⁴¹ As was the case with the introduction of the tank and airplane into warfare, the emergence and development of any new military strategy of waging war brings with them new and unforeseeable dangers.⁴²

³⁹ Nelson, v.

⁴⁰ U.S. Army, *Field Manual 100-10, Contractors on the Battlefield* (Washington, DC: 1997), F-2.

⁴¹ U.S. Army, *Field Manual 100-5, Operations*, June 1993, 3-6.

⁴² Castillo 1.

It is critical that the army find the correct balance of support between military units and civilians. Mr. Joe Fortner, Logistics Specialist for CASCOM and lead for contractors on the battlefield integrated process team, defines the Army's total logistical capability as "the sum of the capabilities of uniformed soldiers and units, Department of Defense civilians, host nation resources (military and civilian), other civilian resources, and contractors."⁴³ Balance is needed to meet the requirements at all the different levels of operations – strategic, operational, tactical. The balance of uniformed soldiers to the others varies based on the situation and level of operation. Determining what is essential at each level is critical.

Mr. Fortner defines essential capabilities as "that portion of a given functional Army capability that must remain in the 'green suit' force structure." Title 10, USC, Section 2464, Core Logistics Capabilities, reinforces his position when it mandates that it is "essential for the national defense that the Department of Defense maintain a core logistics capability that is Government-owned and Government-operated."⁴⁴ In other words, core capabilities are those capabilities that must remain as part of "the Army" force structure.

Section 2464 further defines core logistics capabilities as those things that are "necessary to maintain and repair the weapon systems and other military equipment...and are necessary to enable the armed forces to fulfill the strategic and contingency plans."⁴⁵ Title 10, USC, specifically outlines that maintenance of our weapon systems as a core capability, which would equate to all of this type of maintenance to remain in the

⁴³ Fortner and Jaeckle, 5.

⁴⁴ *Title 10, USC, Section 2464, "Core Logistics Capabilities"* [Online] (January 23, 2000, accessed March 12, 2001); available from <http://uscode.house.gov/usc.htm>.

⁴⁵ Ibid.

uniformed service. However, at the 4th Infantry Division (Mechanized), DynCorps has the contract to deploy with the division and maintain the aircraft. GD Land Systems has the contract to maintain key systems within the ground combat systems, and GTSI, Corp. has the contract to maintain systems automation. The contracts for these companies and many others focus on the maintenance of weapon systems for the division at Fort Hood and at any deployed location – Fort Irwin, Fort Leavenworth, Saudi Arabia, Bosnia, Kosovo, etc. Since weapon system maintenance is a core logistics capability and the 4th Infantry Division (Mechanized) contracts these services, then core logistics capabilities are no longer strictly uniformed service functions.

Each operational level maintains core logistics capabilities. Title 10, USC, Section 2464, Core Logistics Capabilities, mandates that it is “essential for the national defense that the Department of Defense maintain a core logistics capability.”⁴⁶ Joint Vision 2020 establishes two strategic logistical core competencies as Dominant Maneuver and Focused Logistics.⁴⁷ The core logistics capabilities at the tactical level are those capabilities, which provide for the six logistics functions – arm, fix, fuel, man, move, and sustain. The operational core logistics capabilities must bridge the two levels – strategic and tactical. The author of *Contractors on the Battlefield: Thinking “Out of the Box” First Requires a Box*, poses the operational definition of core logistics capabilities as “all system logistics support required in a deployed environment (e.g., theater).”⁴⁸ Therefore, all systems logistics support that is required to deploy is a core

⁴⁶ Ibid.

⁴⁷ U.S. Department of Defense, *National Military Strategy*.

⁴⁸ *Contractors on the Battlefield: Thinking “Out-of-the-Box” First Requires a Box* [Unpublished White Paper] (accessed February 20 2001); available from www.cascom.army.mil/multi/doctrine/#2index.htm. This white paper proposed the idea of needing to provide a central contracting agency to manage all service contracting to reduce the number of stovepipe contracts in the theater of operations.

logistics capability. This definition, the author proposes, is in keeping with Title 10, USC, Section 2464, and links the strategic capabilities with the tactical logistics

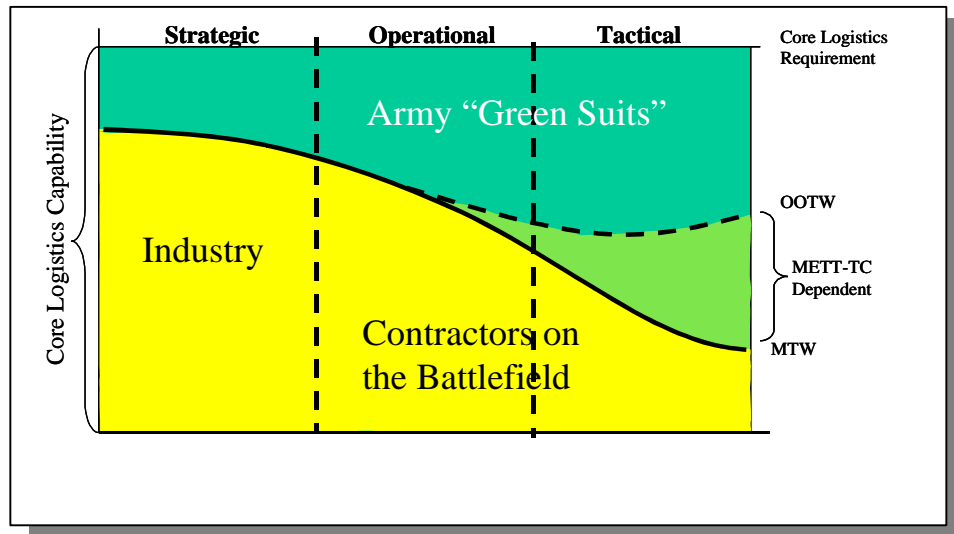


Table 2. Meeting the Core Logistics Requirement

requirements. For example, conducting dominant maneuver from CONUS is a strategic requirement. Employing early entry force into a hostile, possibly a biological or chemical, environment is an operational requirement, and sustaining those operations is a tactical core logistics requirement. Initially the core logistics capability was defined as that capability that must remain in the uniformed service. Theoretically, a core logistics requirement is exactly that – uniformed units. However, practically, core logistics capabilities are a mixture of the total capability to meet the core logistics requirements to accomplish the mission (see Table 2). The severity of the budgeting constraints and reductions of personnel leave the DoD no other option. Mr. Fortner poses another question, “*how much* of each function can be contracted?” Contracting of some services is unavoidable.

According to Field Manual 100-21, “contractors are persons or businesses that provide products or services for monetary compensation.”⁴⁹ All contractors fall into three basic categories: systems, external support, and theater support. A systems contractor provides life-cycle support for weapon and other systems fielded by the Program Executive Office (PEO)/Program Manager (PM) or Army Material Command (AMC) managed systems. This support includes specified maintenance and support of equipment deployed with Army forces. External support contractors work under contracts awarded by contracting officers serving under the command and procurement authority of supporting headquarters outside the theater. Their support augments the commander's organic combat service support capability. Theater support contractors, usually from the local vendor base, provide goods, services, and minor construction to meet the immediate needs of operational commanders.⁵⁰ Utilization of these different types of contractors varies based on the type of contract established. There are an unlimited number of contracting mechanisms for weapons system support, from base camp support to total logistical support provided by BRSC in Bosnia.

Congressional representatives are beginning to wonder if this outsourcing road is leading to trouble on the horizon. Representative Ortiz (D-TX), during a hearing on Military Readiness, Defense Logistics Reengineering Initiatives, expressed concern for our “surge capability... not quite sure it exists any longer.” He believes that the private sector is holding the military hostage.⁵¹ He is not alone in that sentiment, seven other

⁴⁹ U.S. Army, *Field Manual 100-21, Contractors on the Battlefield*, 1-2.

⁵⁰ U.S. Army, *Field Manual 100-10-2, Contracting Support on the Battlefield* (Washington, D.C.: Department of the Army Deputy Assistant Secretary of the Army (Procurement), April 15, 1999), 2-13 thru 12-15.

⁵¹ Anderson.

representatives also expressed similar concerns. Representative Pickett stated “government contractors are bogging us (DoD) down.”

Readiness is a paramount concern for the military. Field Manual 3-0 (Draft) outlines a change in readiness for military units. In the past, the cycle for employment into action began with training, and then notification followed by training focused on the mission and ending with deployment and employment into the theater. In other words, it was a train – alert – train – deploy – employ cycle. The proposed change is a train – alert – deploy – employ cycle. The change is merely eliminating the need for another training phase, however, it places a greater emphasis on the up front training and enforcement of the units readiness requirement. Joint Publication 1-02 defines readiness as the ability to provide capabilities required by the combatant commanders to execute the assigned mission.⁵² According to Webster’s Universal College Dictionary, readiness is “the condition of being ready; ready for action or movement; promptness; and, quickness.”⁵³ Congressional leadership is concerned with the readiness of military units, especially when the readiness of the unit depends on the ability of the contractors who maintain the high-tech systems. Being ready to move does not simply constitute being at the plane or ship at a specified time. It also means being knowledgeable of the mission and environment, being physically fit, being trained, etc.

Commanders must take into account conditioning, both mental and physical, of the contractors, even if they are former military members.⁵⁴ The Army's proposed method to engender reliance and trust builds upon the credo: train as you fight and fight

⁵² U. S. Department of Defense, *Joint Publication 1-02, Department of Defense Dictionary of Military and Associated Terms* (Washington, DC: June 14, 2000), 376-377.

⁵³ , *Webster's Revised Unabridged Dictionary* (Plainfield, NJ: MICRA, Inc., 1998).

⁵⁴ Campbell, 4.

as you train. Unit training must now include contractors. For systems contractors, the concept is to establish a "habitual relationship" between their personnel and the personnel of the unit they support. Systems contractors perform their day-to-day jobs within a military unit. They must establish personal relationships with the members in the unit they support, effectively becoming an integral part of the unit. They will work, train, and deploy with the unit. The idea is that people who work and train together every day will work better on the battlefield. While a sound beginning, this habitual relationship concept leaves unanswered questions concerning physical conditioning, fitness requirements and training contractor personnel to work in hostile environments.⁵⁵ The establishment of a habitual relationship should aid in the identification and resolution of such problems and thus build confidence, ultimately focused on ensuring the unit and its supporting personnel, whether they are soldiers or contractors, are ready.

Representative Bob Riley (R-AL), House Armed Services Committee on Readiness, is extremely concerned with putting private contractors on the battlefield.⁵⁶ The majority of contractor support happens at echelons above the division. However, in the case of the 4th Infantry Division (Mechanized), contractors are on or near the front lines, maintaining the high tech equipment. By law, the military cannot force contract personnel into harms way, except in times of a declaration of war by Congress. Expecting the declaration to alleviate these issues is not likely since the last time Congress declared war was December 8th, 1941 the day after the attack on Pearl Harbor. Since that time, Congress has been very leery about making the declaration. A Logistics Management Institute (LMI) study in 1980 stated that "...should civilians leave their job

⁵⁵ Ibid.

⁵⁶ Anderson.

in wartime or other periods of heightened tension, the material readiness of key systems would be jeopardized.”⁵⁷ The DoD Inspector General (IG) in 1988 and 1991 said that DoD cannot ensure continued emergency-essential services supported by contractors will continue during mobilization or hostilities. It also states that the DoD has no legal basis to compel contractors to perform and no means to enforce contractual terms.⁵⁸ In the event that the contractors leave, it would place in jeopardy the success of the mission and the lives of the soldiers that depend on their essential support.

History demonstrates that contractors do remain on the job during the times of crisis. The Gulf War had a multitude of contractors on the battlefield. The daily threat of SCUD missiles and chemical attack did dissuade some but not all from remaining in place to accomplish the mission.⁵⁹ However, critics of the use of contractors recall the tree-cutting incident on the demilitarized zone in Korea in 1976 that resulted in the death of an Army officer and upgraded our defense condition to level three. As a result, hundreds of Army civilians requested immediate transportation out of the Korean theater.⁶⁰ “Habitual relationships” build a sense of camaraderie between the soldiers and the contractor, helping to reinforce the contractors desire to stay and help the unit accomplish the mission. S.L.A. Marshall discusses this type of combat morale incentive in his book *Men Against Fire*.⁶¹

An inability to perform during wartime may become quickly and painfully apparent, but problems with contractor readiness may prove harder to detect before

⁵⁷ Robert D. Kaiser and Richard M. Fabbro, *DoD Use of Civilian Technicians* (Washington, D.C.: Logistics Management Institute, July 1990), iii.

⁵⁸ DoD Inspector General, *Civilian Contractor Overseas Support* (Washington, D.C.: DoD Inspector General, 1991), Audit Report, 1-3.

⁵⁹ Zamparelli, 8.

⁶⁰ Orsini and Bublitz, 132.

actually deploying into combat. Under current DoD directives, the military continuously monitors the readiness of its units for combat operations. The services' inspectors general and command-level oversight organizations make independent determinations about whether units are sufficiently manned, equipped, trained, and able to complete their missions. Determining contractor readiness is a sensitive issue, especially if the terms and conditions of the contract do not specifically outline inspection criteria.

Just as the contractor has responsibilities to fulfill in the contract, the government has responsibilities to the contractor. The United States government assumes responsibility for the contractors it brings into the theater. The government must provide a safe workplace. The United States government must provide contractors in the theater the same medical care as military personnel.⁶² The Army will provide or make available, on a reimbursable basis, force protection and support services commensurate with those provided to DoD civilian personnel to the extent authorized by law. These services may include but are not limited to non-routine medical/dental care; mess; quarters; special clothing, equipment, weapons or training mandated by the applicable commander; mail, and emergency notification. Additionally, responsibilities are outlined in Field Manual 100-10-2. Planners must ensure agreed upon support to contractors is available to the responsible commander.⁶³ Furthermore, planners should be concerned with cost, physical protection requirements, and coordination of the contractor's requirements with the military's requirements.⁶⁴

⁶¹ S.L.A. Marshall, *Men against Fire: The Problem of Battle Command in Future War* (Gloucester, MA: Peter Smith, 1978).

⁶² Department of Defense, *DoD Instruction 3020.37* (Washington, D.C.).

⁶³ U.S. Army, *Field Manual 100-10, Contractors on the Battlefield*, F-2.

⁶⁴ David L. Young, "Planning: The Key to Contractors on the Battlefield," *Army Logistician* 31, May - June 1999.

The laws of warfare, known as the Laws of Armed Conflict, were outlined for the international community through two key conventions – 1907 Hague and 1949 Geneva Conventions.⁶⁵ There are three categories established for personnel on the battlefield – combatants, noncombatants and illegal belligerents. Combatants are “members of the armed forces that participate in direct hostilities with enemy forces.”⁶⁶ Noncombatants are personnel “who accompany the armed forces, but are not members of the armed forces provided they received authorization from the armed forces that they accompany.”⁶⁷ Noncombatants must refrain from direct support of the hostile activities.⁶⁸ Illegal belligerents or combatants are “personnel who are not members of the armed forces who participate in hostilities.”⁶⁹ Under international law, combatants and noncombatants, if captured, are entitled to prisoner of war status (see Table 3).⁷⁰

The status of
contractors - illegal
belligerents or
noncombatants – is a

Category	Military Target	POW Status	War Criminal
Combatants	Yes	Yes	No
Noncombatants	No	Yes	No
Illegal Combatants	Yes	No	Yes

Table 3. Combatants Verses Noncombatants

critical issue. In a situation where both sides recognize the international law, if a contractor is captured they are entitled to noncombatant status.⁷¹ However, if the captured contractor directly participated in hostile activities, the contractor is now

⁶⁵ Carl A. Buhler, Major, USAF, “When Contractors Deploy: A Guide for the Operational Commander” (Final, Naval War College, 2000).

⁶⁶ *Geneva Convention, Protocol I, Article 43* [Internet] (August 12, 1949, accessed April 14, 2001); available from <http://www.unhchr.ch/html/menu3/b/93.htm>.

⁶⁷ U.S. Army, *Field Manual 100-21, Contractors on the Battlefield*.

⁶⁸ What is considered direct support? Can the enemy misconstrue the maintenance and repair of the computer systems, which are attacking command and control systems direct support? This is just one of the many examples that DoD must address.

⁶⁹ *Geneva Convention, Protocol I, Article 43* [Internet] (August 12, 1949, accessed April 14, 2001); available from <http://www.unhchr.ch/html/menu3/b/93.htm>.

⁷⁰ Zamparelli, 16.

considered an illegal belligerent. Therefore forfeiting the “rights and privileges” of prisoner of war (POW) status and is subject to a war crimes trial. It is important for the military to ensure that its contractors brought into the theater maintain their noncombatant status.

The full protections granted to Prisoners of War (POWs) under the Geneva (1949) and Hague (1907) Conventions apply only during international armed conflicts between signatories to those conventions. Accordingly, these conventions are generally non-applicable during operations other than war.⁷² “One of the key differences between the contractor and the soldier – and also one of the primary reasons contractors do not qualify under the definition of combatants – is they are not subject to the military’s internal disciplinary system, the Uniform Code of Military Justice (UCMJ), unless there is a declared war.”⁷³ For contractor personnel, command and control is dependent upon the terms and conditions of the contract.⁷⁴ The contracting officer is the only government official with the authority to modify a contract.⁷⁵ Again placing undo burden on the commander during the time he needs to focus on the enemy not on internal discipline.

During a declared war, civilian contractors accompanying the force are subject to UCMJ.⁷⁶ Despite the number of conflicts within the last forty years, the last time the United States declared war was World War II. Since the commander lacks command and control authority over contractor personnel, the terms and conditions of the contract govern the contractor’s relationship with the government, and without a declaration of

⁷¹ U.S. Army, *Field Manual 100-21, Contractors on the Battlefield*, 1-2.

⁷² U.S. Army, *Field Manual 100-10, Contractors on the Battlefield*, F-3.

⁷³ Buhler.

⁷⁴ U.S. Army, *Field Manual 100-10, Contractors on the Battlefield*, F-2.

⁷⁵ Ibid.

⁷⁶ Ibid.

war, contractors, like any United States citizen, are subject only to the laws of the nations in which they are in--not United States law. As an example, in situations where a government is non-existent, a contractor, there to support the United States national interest, could murder, rape, pillage and plunder with complete legal unaccountability.

The United States Senate has made an effort to close this criminal jurisdiction gap by passage of Senate Bill S. 768: *The Military and Extraterritorial Jurisdiction Act of 1999*. The purpose of the bill is two fold:

1. It extends the jurisdiction of the UCMJ during a declared contingency to DoD civilians and contractor employees (while supporting said contingency).
2. It extends Federal Criminal Legal jurisdiction over said individuals (plus former members of the Armed Services) while they are overseas accompanying the Armed Forces. The Bill seeks to close "*the gap that allows individuals accompanying our military personnel overseas to go unpunished for heinous crimes*".⁷⁷

The extension of UCMJ authority will have a negative impact in contract administration. The need for control is strong within the army and control is administered through the use or threat of discipline. Trying to place contractors under UCMJ is not the solution. Writing flexible well thought out terms and conditions and then enforcing them is the right solution – this is the real issue. However, if military discipline/command and control is required, then troops should be doing the work .

Another major issue is protection for the contractors, especially those accompanying divisional troops. The commander must protect his contractors because

they can do little to protect themselves. The most a contractor can do is protect himself with a personal side arm. He cannot protect others, his equipment, or position. If he does so, he risks being identified as an illegal belligerent. The threat level in Somalia was such that the LOGCAP contractor required a military escort nearly all the time; at various times, as many as 12 to 18 marines or soldiers were assigned to escort duty. In contrast, the LOGCAP contractors traveled nearly one million miles a month on the open roads of Croatia, and Hungary, without the need of force protection.⁷⁸ In Bosnia nearly two companies of infantry were used to protect logistical operations – run mostly by contractors. Given an asymmetric threat on a nonlinear battlefield, there is no “safe” zone within the area of operation. Regardless of where they are located, contractors must understand they are at risk wherever they are on the battlefield. Since the contractors are limited in their actions, the commander must withhold sufficient combat power to protect his contractors and their operations.

The issues outlined above are a small portion of the total issues the DoD and DA are currently working through to enable the commander to successfully complete the assigned mission. These issues outline responsibilities of all parties, and specific frustrations like command and control that face the commander. If the contractor does not feel safe and quits, there is little the commander can do. The contracting corporation must fill the position but the commander still has a vacancy in critical support in the middle of an operation. Many things can happen while the contracting corporation tries to replace the departed individual. It would be of little comfort to a commander to know

⁷⁷ Campbell, 6.

⁷⁸ Young, 3.

his contractor is in violation of his contract as his mission fails -- particularly if people are being killed.⁷⁹

Contractors and their employees must understand what is expected and soldiers need training on the nature of contractual relationships and the limits of what a contractor can do.⁸⁰ Reliance and trust are the keys to success. Soldiers need to know the support is there and contractors need to know they are not expendable.

This chapter defined contracts and the different types of contractors. It provided an understanding of the expectation of the Army and the contractors – both the employee and employer, and identified many tough issues that face the commander when he attempts to employ contractors to meet core logistics capabilities. The chapter also defined core logistics capabilities within the context of Title 10 and DA expectations. Core logistics requirements at each level require a different mix of capabilities to accomplish the mission, as illustrated in Table 2. At the strategic level the focus is more on partnerships with industry, while the focus at the tactical level is the uniformed soldier. With the foundational understanding now presented, the next chapter will identify critical attributes (analysis criteria) of core logistics and determine if contractor support can meet those requirements.

⁷⁹ Campbell, 5.

⁸⁰ Ibid.

Chapter 3 – Analysis

Sound logistics forms the foundation for the development of strategic flexibility and mobility. If such flexibility is to be exercised and exploited, military command must have adequate control of its logistical support.

Rear Admiral Henry E. Eccles⁸¹

This chapter will outline the criteria for identifying if contracting core logistics functions is sound or if the United States military is accepting too much risk regarding contract logistics. The criteria of responsiveness, flexibility, and economy will provide the structure for the analysis. Before proceeding with the analysis, it is important to define the analysis criteria to eliminate ambiguity of thought. The analysis will focus on theater service contracts and their use within the 4th Infantry Division (Mechanized) to determine the affects of the criteria on operations.

In determining the criteria for the analysis of contracting core logistical capabilities, it important to look at the combat service support (CSS) characteristics as a starting point for the analysis criteria. Field Manual (FM) 4-0, Combat Service Support, (Final Draft) outlines eight characteristics of logistics – responsiveness, simplicity, economy, flexibility, attainability, sustainability, survivability, and integration. FM 4-0 defines each characteristic in detail: responsiveness is the ability to provide the right support in the right place at the right time; simplicity is avoiding unnecessary complexity in both planning and executing CSS operations; economy is providing the most efficient support at the least cost to accomplish the mission; flexibility is being able to adapt CSS structures and procedures to changing situations, missions, and concepts of operations;

⁸¹ Nelson, 10.

attainability is the ability to generate the minimum essential supplies and services necessary to begin operations; sustainability is being able to maintain continuous support throughout the theater for all phases of campaigns and operations; survivability is being able to shield support functions from destruction or degradation; and, integration involves total incorporation of Army CSS with the operations process.⁸²

These characteristics are not simply a checklist, they serve as reminders for planning and execution to support combat operations. The keystone of logistical principles is responsiveness, “all else become irrelevant if the logistic system cannot support the concept of operations of the commander.”⁸³ The commander must maintain command and control over the logistical organizations to maintain flexibility. Logistics plans and operations must remain flexible to achieve responsiveness and economy. Economy “provides the fewest resources at the lowest cost and with acceptable levels of risk.”⁸⁴ The commander must continually optimize the use of resources to ensure responsiveness and flexibility.

As quoted in Joint Publication 4-0, Doctrine for Logistics Support of Joint Operations, and Field Manual 4-0 (Final Draft), Combat Service Support, defines responsiveness as the ability to provide the right support in the right place at the right time and involves the ability to meet changing requirements on short notice and anticipating those requirements. The right support at each level is the core logistics requirement. Core logistics “must be maintained to ensure that support to deployed

⁸² U. S. Department of Defense, *Joint Publication 4-0, Doctrine for Logistics Support of Joint Operations* (Washington, DC: April 6, 2000), II-1.

⁸³ Ibid.

⁸⁴ Ibid., II-2.

forces.”⁸⁵ The ability to provide the core logistics support is dependent on the total capabilities available to accomplish the mission. As the military depends more and more on contractors to fulfill core logistics requirements, the ability of the contractor to maintain responsiveness is critical. It is the keystone to the logistics principles. The United States military has adopted a force projection philosophy, which requires the United States to project forces anywhere in the world from the Continental United States (CONUS). During the Cold War, the United States prepositioned forces to ensure responsiveness. Responsiveness was focused on tactical actions and reactions to the enemy on the plains of Europe. This is a strategic and operational issue and contractors must respond at the same speed as the unit they are supporting.

Webster’s Universal College Dictionary defines flexibility as the capability to bend without breaking, pliable, adaptable.⁸⁶ This definition describes in clear terms the underlying theme of flexible logistics operations. JP 4-0 and FM 4-0 define flexibility as “the ability to adapt the CSS structures and procedures to the changing situations, missions, and concepts of operations.” The idea is to anticipate requirements and have a logistical structure that can adapt or adjust to the changing situation and accomplish the mission. As stated earlier in chapter two, only the contracting officer can change the terms of a contract. Contractor actions are governed by those terms and conditions. It becomes imperative to look at this principle as a critical trait in determining the capability of contractors on the battlefield to accomplish core logistics requirements.

⁸⁵ Ibid., V-5. and U.S. Army, *Field Manual 4-0/100-10 Combat Service Support* (Fort Lee: U.S. Army Command Arms Support Command, 18 November 2000), I-4.

⁸⁶ *Webster's Revised Unabridged Dictionary* (Plainfield, NJ: MICRA, Inc., 1998).

“Limited resources dictate that the Services must adjust the size of inventories...doing so will improve overall responsiveness and force readiness.”⁸⁷

Resource limitations also apply to the availability of logistical capability. The DoD reduced its end strength across all Services by thirty percent. Additionally, reducing the number of overseas en route infrastructure installations by sixty percent. These reductions place a premium on the total logistical capability available to DoD. Using the best mix of active, reserve, National Guard, government civilians, host nation and contractor personnel is extremely important to the success of the operation. JP 4-0 and FM 4-0 (Final Draft) define economy as “providing the most efficient support at the least cost to accomplish the mission.”⁸⁸ An excellent historical analogy that demonstrates logistical flexibility is found in General Grant’s 1963 Vicksburg campaign. As General Grant moved from his river crossing site at Bruinsburg toward Jackson, Mississippi, the extended logistical lines of communications (LOC) required that he take away combat power from the front to support the sustainment flow. The amount of combat support required to protect the LOCs affects the accomplishment of the operation, therefore, the more self-sufficient the support system the less the cost to the combat operation.

With a basic understanding of the eight logistics principles, the three principles of responsiveness, flexibility, and economy will help to focus the analysis on whether the military is assuming too much risk. The analysis section will conclude with a risk assessment based on the issues discussed so far. Where possible, the contracts in use at the 4th Infantry Division (Mechanized) and the contractor’s performance will assist in the

⁸⁷ U. S. Department of Defense, *Joint Publication 4-0, Doctrine for Logistics Support of Joint Operations*, i. and U.S. Army, *Field Manual 4-0/100-10 Combat Service Support*, 1-4.

⁸⁸ U. S. Department of Defense, *Joint Publication 4-0, Doctrine for Logistics Support of Joint Operations*. and U.S. Army, *Field Manual 4-0/100-10 Combat Service Support*.

analysis. When the empirical data is not available, use of recent examples inclusive of the Gulf War provide the underlining data for analysis.

Responsiveness is the keystone to force projection. 4th Infantry Division (Mechanized) assumes the land component of the contingency response requirement for the National Command Authority (NCA) beginning October 2001.⁸⁹ One brigade's equipment is prepared for short notice deployment and personnel are prepared for overseas movement and put on recall notice of no more than six hours. The intent for the rapid responsive force is that it begins deployment within eight hours. The completion time depends on the level of threat and mission assigned. Earlier this monograph discussed the importance of contractors and the role they play in the ability of the 4th Infantry Division (Mechanized) to accomplish the mission. The III Corps contracting officer included a clause in the contracts of contractors for critical support the requirement of six hours preparedness for overseas movements. The deployment structure established on Fort Hood includes a system for deploying contractors through a special process that resembles the system units utilize but focuses on contractor issues and needs. During the recent deployment to Fort Irwin for the Division Capstone Exercise (DCX), contractors deployed using the same timeline and assets as the military units. Except for their uniforms, it was difficult to distinguish between the contractors and the unit personnel.

In Bosnia, contractors put into action the same methodology of support. Colonel Herman Palmer, then G4 for Task Force Eagle, 1st Armored Division (Forward), and Multinational Division (North), relates an incident in his article, *More Tooth, Less Tail: Contractors in Bosnia*, how after careful planning, United States soldiers took a hilltop

tower. Within thirty minutes of arrival of the last infantryman, military vehicles loaded with contingency supplies of sandbags, plywood, barbed wire, and pickets, roared to a stop on the hilltop. "The troops were surprised at its arrival, and even more surprised when civilians jumped from the vehicles and began preparing to drop its cargo."⁹⁰ The right support, mixture of total capabilities, at the right place and right time enables success on the battlefield.

Operational logistics forces must respond quickly to support the operation. United States Army Materiel Command (AMC) established a LOGCAP Support Unit (LSU) whose purpose is "to enhance LOGCAP worldwide contingency support capabilities and increase LOGCAP military presence and interface with the supported customer in the field."⁹¹ LSU's mission is to enhance warfighter readiness and furnish support to soldiers in the field by being the Army's interface with contractors on the battlefield, and to represent AMC at the foxhole. The LSU is an important addition to the existing LOGCAP program. Members of the LSU participate during exercises, operations, and contingencies throughout the world. The units organize into flexible deployment packages to support Europe, Pacific and Southwest Asia and the Southern Hemisphere.⁹² A LOGCAP contractor entered Somalia, Rwanda, Haiti, and Bosnia only days after the first United States troops deployed.⁹³ LOGCAP and the LSU enhance responsive operational logistics capabilities to the theater commander.

⁸⁹ According to 4th Infantry Division (Mechanized) planning calendar as of 5 March 2001.

⁹⁰ Colonel Herman T. Palmer, "More Tooth, Less Tail: Contractors in Bosnia," *Army Logistician*, September - October 1999, 6.

⁹¹ Army Materiel Command, *Logistics Civil Augmentation Program (LOGCAP) Support Unit (LSU)* [Internet] (Unknown 2000, accessed April 6, 2001); available from http://www.amc.army.mil/dcs_logistics/lg-ol/LSU.html.

⁹² Ibid.

⁹³ Young.

The mobility triad - airlift, sealift and prepositioned equipment – provide for strategic responsiveness of forces. To accomplish strategic responsiveness, strategic forces agree to provide necessary capability to the DoD rapidly as designated in the terms of the contracts. The United States Transportation Command (USTRANSCOM) manages and operates the Civil Reserve Air Fleet (CRAF) and the Voluntary Intermodal Sealift Agreement (VISA) programs. CRAF and VISA have three activation levels all having time and asset responsiveness levels. During the Gulf War, CRAF responded within 24 hours of notification with ten 737 aircraft – 4,300 passenger capability. VISA was signed in 2000 so historical data on responsiveness is unavailable but USTRANSCOM and industry partners are confident that they will meet or exceed VISA needs. The third program, Prepositioned Equipment, is the responsibility of the Services for equipping and USTRANSCOM for movement. The ashore prepositioned assets provide responsiveness assuming the conflict is in the region of the ashore prepositioned assets. The afloat assets based near Diego Garcia, in the Indian Ocean, can respond to most locations within the time personnel begin to arrive in theater. Other partnerships with industry and the Services provide responsive strategic support for deployed forces. From top to bottom, contractors provide responsive logistical support to meet the core logistics requirements, therefore, forming the nucleus of the core capability of the military.

Flexibility is important in the uncertain environment of war. The commander must flex their organizations to meet the operational requirement. Representative Pickett (D-TN), member of the House Armed Services Committee (Military Readiness), believes “that warfighters will not, and are not getting the service they need and

require...government contractors are bogging [DoD] down.... it's unacceptable."⁹⁴

There are potential downsides of going to war with civilians. One of the most obvious is the loss of flexibility. A commander's freedom and ability to improvise quickly are essential to victory in combat. To stop during combat to rewrite or renegotiate contractor obligations severely hampers a commander's ability to accomplish the mission. "A contract—a legal, binding document—even when written with the best of intentions, cannot cover every possible contingency in advance."⁹⁵ Writing contracts to take into account every possibility becomes extremely important and eventually will require every field commander to become contract writing and contract law experts.⁹⁶ Tactical flexibility is hard to accomplish using a document agreement that must cover every conceivable aspect. There are operational and strategic issues with contractors and flexibility.

On a strategic and operational level, using civilian contractors to meet core logistics requirements provides more flexibility than deploying uniformed personnel into combat areas. In an effort to ease political apprehension about force levels, recent operations had force caps to limit uniformed personnel involved in the theater. Contractors do not count against the force cap and therefore, the commander can deploy more combat focused personnel and allow the contractors on the battlefield to provide the logistical support. While planning for the Bosnian peacekeeping operation, President Clinton promised to limit the number of deployed troops to fewer than 20,000. Presidential authority to deploy over two thousand additional civilians gave him the

⁹⁴ Anderson.

⁹⁵ Zamparelli, 6.

⁹⁶ Orsini and Bublitz, 131.

political flexibility to send in additional manpower to support the operational force.⁹⁷ In a like manner, President Johnson “avoided congressionally mandated troop ceilings by employing over 80,000 contractors during the most intense part of the war.”⁹⁸ Regardless of the potential ethical questions of skirting United States law, contractors provide strategic and operational flexibility in the theater to support the mission with more warfighters and ultimately keeping the limited number of logistics uniformed personnel available for other operations.

Economy is relevant on many different levels. National defense and maintaining the nation’s interests are very expensive, costing hundreds of billions annually. Extreme financial pressure is forcing leaders into actions that affect the commander’s wartime mission accomplishment ability. This analysis will focus on making the best use of limited monetary assets and allocated forces at the strategic, operational, and tactical levels.

Economy at the tactically level, according to United States military doctrine, is to “allocate minimum essential combat power to secondary efforts.”⁹⁹ Commanders should concentrate the majority of their military power toward a clearly defined, primary threat rather than compromise the effort against numerous secondary priorities.¹⁰⁰ At the tactical level, contractors on the battlefield are secondary priorities. Since contractors are legally classified as noncombatants they cannot defend themselves as well as uniformed

⁹⁷ Castillo, 6.

⁹⁸ Ibid.

⁹⁹ U.S. Army, *Field Manual 100-5, "Appendix A: Principles of War"*, June 1993 ed. (Department of the Army, 1993), 174 - 175.

¹⁰⁰ Barry R. Schneider, *Chapter 1, Principles of War for the Battlefield of the Future* [Internet] (United States Air Force, 2000, accessed April 6, 2001); available from <http://www.airpower.maxwell.af.mil/airchronicles/battle/chp1.html>.

logistics personnel.¹⁰¹ Logistical units are capable of deterring up to a level two threat – company and below sized enemy formations. Therefore, the commander must allocate some of his combat power to protect contractor personnel from the level one and two threats or deploy contractors to places only where there is minimal threat. Depending on the operation, the fracturing of combat power to support sustainment operations can prevent successful accomplishment of the mission and could result in unnecessary deaths. Strategically and operationally, as stated in the analysis of flexibility, the use of contractors provides the commander with options to best support all the ongoing efforts of the operation. Additionally, the cost of outsourcing may help ease the budgetary burden placed on the military.

Contractors can provide “expertise on a case-by-case basis, without the cost of training, housing, and paying individuals for the previous 10 years.”¹⁰² When paying a contractor, the military does not incur future expenses for discontinued systems, continuation training, medical and retirement. During contingencies, however the costs seem to increase dramatically. For CRAF and VISA partners, the military pays a 30 percent premium charge for use during a contingency. The difficulty in the use of contractors is tracking the actual cost for the operation. During the Bosnia deployment, LOGCAP costs for the first year alone was over \$459 million, an excess of over 32 percent from the estimated budget.¹⁰³ Defense is expensive in dollars and manpower. The issue is how to most effectively balance requirements with the capabilities needed.

The investigation of responsiveness, flexibility and economy provides a foundation of assessing the benefits and risks associated with using contractors on the

¹⁰¹ Castillo, 6.

¹⁰² Althouse.

battlefield from the strategic level to the tactical. The projected benefits of using contractors also have commensurate risks associated.

Possible benefits range from enhanced deployment capability to providing expanded capabilities for wartime support. Enhanced responsiveness at the strategic level includes the ability to leverage industry's large lift capabilities. Operationally, using contract support available within a theater reduces the lift requirement for deployment into theater. Tactically, contractors provide logistical support upon arrival of forces into the theater. At the strategic and operational levels, contractor support enhances flexibility by saving the limited logistical units for other short notice requirements. Contracting support also provides an offset of the operational tempo for low-density skills. Contracting out requirements help to reduce the number of days those soldiers are away from home station. Economically, the use of contractors helps to increase combat power in force-constrained circumstances, i.e. host nation limits uniformed strength. Contracting support also provides wartime capabilities that the Army no longer can afford to maintain in a peacetime resource constrained environment.

The risks and costs include: risks revolve around contractor failure at either the strategic, operational, or tactical levels. The impact of failure at any level is critical since contractor support is now a portion of the core logistics capabilities.

Strategic responsiveness requires forces that are ready for deployment and employment on short notice. There are several points for strategic concern. The first is the ability of the contractor to respond. The 4th Infantry Division (Mechanized) worked the contracts for its' contractor personnel to deploy as a part of the time-phased force deployment flow (TPFDD), ensuring their place on the limited assets. The concern is for

¹⁰³ Young, 6-7.

other contracts already in place that may not include the 4th Infantry Division's terms and conditions. Deploying from CONUS places a premium on the utilization of the limited assets, making the need for efficiency a paramount concern. USTRANSCOM has enough assets to support one major theater of war (MTW). The NCA has accepted risk in a two MTW scenario. It requires an undetermined amount of time between the beginning of the first MTW and the second. The ability of USTRANSCOM to support a two MTW scenario requires the most efficient use of all available assets. If there exists a competing demand for the limited assets the United States military runs and even greater risk of not accomplishing the mission. Other concerns are for civilians who receive assignments to a combat theater. Procedures to govern their rotation and transportation into and out of hostile-fire areas are but a few important considerations. Although the Joint Staff currently addresses this dilemma by including contractors in time-phased force and deployment data planning, this does not solve the problem. For every contractor occupying a seat on a transport aircraft, one fewer soldier arrives in-theater.¹⁰⁴

Operational responsiveness is vulnerable to enemy actions, particularly in an NBC environment where the United States does not have a good plan for actions to operate in that type of environment.¹⁰⁵ During the Persian Gulf War, the military successfully employed many contractors, however the Iraqi's allowing the coalition forces six months to build up a combat power and establish logistics bases. In the future adversaries will likely not allow such an extended time to prepare. Speed will be a more prominent factor. Tactically, the responsiveness of the contractors on the battlefield is dependent on the security of the environment and ability of the contractor to meet the

¹⁰⁴ Orsini and Bublitz, 4.

mission requirement. The ultimate danger is if a contractor departs the area without notice, then the military units or other capabilities are not available to fill the requirement gap.

Additionally, flexibility risks are found at the operational and tactical levels. When soldiers go into harms way, cost efficiency is no longer the first priority. The focus shifts to accomplishing the wartime mission and survival. During the Cold War, the commander could routinely turn to his troops to perform tasks other than their primary specialty. Given today's sophisticated weapon and support systems, however, dual military occupational specialty (MOS) training of military members is less of an option.¹⁰⁶ Contractor personnel filling these critical positions are restricted by the terms and conditions of the contract. Their ability to participate in other activities to accomplish the mission is severely limited. Except on a limited case-by-case basis, the commander has lost flexibility at the tactical and operational level. This limited flexibility affects the economic use of the limited capabilities available.

Strategically, the economical considerations focus on monetary issues. The bottom line for the contractor company and employee is profitability. Costs for using contractors are "often out of sight deep within the contract specifications...do not become apparent until the contract is employed in a wartime or contingency situation."¹⁰⁷ Just like in Bosnia where the contract for services ran over budget by thirty-two percent, the cost of business is extremely difficult to program. Once the contractor personnel replace

¹⁰⁵ Maj Gen Norman E. Williams and Jon M. Schandelmeier, "Contractors on the Battlefield," *Army Magazine*, January 1999, 3.

¹⁰⁶ Castillo, 7.

¹⁰⁷ *Combined Arms Support Command (CASCOM) Review of the 10 Pilot Program Implementation Plans for Total Ownership Cost Reductions (Draft)* (Fort Lee: Combined Arms Support Command, 1999), Information Paper.

the force structure, a monopoly exists and the military is in a situation where the contractor often can virtually name their price. Tactically, economy focuses on the ability of the commander to concentrate his efforts on the primary task – warfighting – and not on the priority two tasks. The commander’s ability to maintain unity of effort with contractors on the battlefield is METT-TC dependent. On a linear battlefield the commander can maintain greater effort forward, however, in a non-linear, non-contiguous battlefield the commander must commit a considerable amount of his combat power to provide force protection. Remember, contractor personnel cannot defend their equipment, position, soldiers, or co-workers. They can only conduct self-defense. If the contractor feels his safety is in jeopardy, he may quit and leave the area. The commander’s only recourse in that situation is to declare the contractor company in violation of its contract, but that does not eliminate the threat to mission accomplishment.

Cuts in both uniformed and DoD civilian personnel, extreme budgetary constraints, government pressure to privatize or outsource work traditionally performed by the military, and an increasing need for contractors to maintain highly sophisticated weapon, logistics, and communications systems forced the military to use contractors to accomplish the mission.¹⁰⁸ It takes ten to fifteen years to develop some of the technical skills necessary to maintain high-tech systems. The contracting of these functions, while helping in this fiscally constrained environment, may leave the military without the necessary expertise. If this outsourcing experiment fails, the military will find itself unable to instantly grow, train, and benefit from the experience of the mid- and upper-level managers now developed within the enlisted and officer corps. It will take close to an entire career of 20 years before the military can regain the capability now resident in

its personnel.¹⁰⁹ However, in an emergency, the military might be forced to recall personnel with the necessary skills, much like it did in the late 1960's with the Berlin Crisis. In 1960, the army faced a potential military crisis and realized it had reduced its medical support to levels that could not support the impending missions. DoD recalled physicians into the Public Health Service to assist in lessening the burden.¹¹⁰ While this is a method of relief, it is definitely not one desirable. The more appropriate method is to proceed cautiously ensuring that DoD is taking the right step to maintain peacetime support and thoroughly anticipated wartime needs. The amount of support contractors' provide, their closeness to the battlefield, and the necessity of their contribution to mission accomplishment makes the issue of contractors on the battlefield critically important.¹¹¹ The well thought out and balanced use of contractors on the battlefield is the optimal solution to this difficult task.

¹⁰⁸ Zamparelli, 11.

¹⁰⁹ Castillo, 4.

¹¹⁰ Department of State, *The Berlin Crisis: Research Project No. 171* [Internet] (Department of State, 1961, accessed April 17, 2001); available from http://www.whistlestop.org/study_collections/berlin_airlift/large/topsec/bal16-1.htm.

¹¹¹ Zamparelli, 9.

Chapter 4 – Conclusion and Recommendations

In all countries engaged in war experience has sooner or later pointed out contracts with private men of substance and talents equal to the understanding as the cheapest, most certain and consequently the best mode of obtaining those articles, which are necessary for subsistence, covering, clothing, and moving of an Army.¹¹²

Robert Morris, Superintendent of Finance

February 1781

The presence of contractors on the battlefield of the future is inevitable. During World War II, the manufacturer's technical representative became a prominent feature in forward areas. Technical representatives were found in the front lines seeking solutions to technical and operational problems regarding equipment supplied by their firms.¹¹³ Since the 1950s, the army has depended on the assistance of civilian contractors for success during operations. This trend will continue in the future.

The expectation is that contractors on the battlefield will continue to increase because of the currents within the business world today. Outsourcing is a business trend that the United States government, and consequently the military services, has taken to heart. The need to reduce military expenditures and the desire to shift various governmental functions to private business have made the issue of contractors on the battlefield important for American leaders. As a result, the United States military will find itself short of skilled logistical support personnel. During peacetime, logistical personnel and capabilities are often sacrificed to maintain warfighting capability.¹¹⁴ The typical support of services is building to include life support, weapon systems support, and other technical services. "The common denominator in all of these efforts is that

¹¹² Shrader, 2.

contractors are asked to provide direct support to our military forces worldwide, including those in forward-deployed locations.”¹¹⁵

Despite the prevailing economic and political trends and the proven effectiveness and cost-savings of using civilian contractors on the battlefield, there remains considerable resistance to the practice. This resistance revolves around several issues – status, discipline, responsiveness, flexibility, and economy. Maintaining the status of “non-combatant” for contractors is important for several reasons. First, is for the safety of the contractor personnel during combat operations. Status as non-combatants means contractor personnel do not count against the “combatant” force limitations the military often finds itself under in the global political realm. Discipline is inherent within the military. The use of the Uniform Code of Military Justice (UCMJ) is the foundation for that discipline. Contractor personnel are not subject to UCMJ, except during a declaration of war. Contractors are responsible to the terms and conditions established with the contract. It is best to solve most issues by mutual agreement before deployment.¹¹⁶ The United States Senate is working on passing a law to make contractors subject to the UCMJ, however, that sort of decision will bring about many new issues, to include the status of contractors on the battlefield.

The responsiveness of contractor personnel is critically important because it is the cornerstone to the system of power projection for the United States military. Failure to rapidly respond when called will result in a failure to accomplish the mission. In the event the contractor employee does not agree with the mission or does not like the

¹¹³ Ibid., 6.

¹¹⁴ Ibid., 1 & 11.

¹¹⁵ Young, 1.

¹¹⁶ Ibid., 6.

dangers involved, he may decide not to deploy. Having a choice on whether to go or not is not an option for military personnel. This option idea for contractor personnel does not sit well with most military commanders.

Military organizations provide unequalled flexibility for the United States Army and its commanders. The issue is that when contractors replace Army personnel does it also lose that flexibility. On the tactical level, the terms and conditions of the contract dictate the flexibility. Even General Washington and Alexander Hamilton pointed out that the contractors were often more concerned with increasing their profits than with providing the Army with supplies and services it needed.¹¹⁷ At the strategic and operational levels of war, the use of contractors provides the necessary flexibility to deploy, employ and sustain the military force anywhere in the world. The ability to have flexible capabilities has a direct impact on the most economical use of force.

According to Clausewitz "...as many troops as possible should be brought into the engagement at the decisive point...this is the first principle of strategy."¹¹⁸ If a commander has no organic support (military provided) capability and is therefore totally reliant upon contractors, his range of options may be reduced to one of purposely placing civilians at risk or not accomplishing the mission. Since contractors are noncombatants, they require protection by military forces. Therefore, the commander must commit some of his limited ground forces to support the sustainment of his troops. In Bosnia, the commander committed nearly two companies of infantry to provide force-protection on a daily basis. At the tactical level, this is major concern.

¹¹⁷ Shrader, 3.

¹¹⁸ Carl von Clausewitz, Michael Eliot Howard, and Peter Paret, *On War*, Rev. ed. (Princeton, N.J.: Princeton University Press, 1984), 194-195.

The use of contractors on the battlefield is expected. As COL John C. Deal and Mr. James H. Ward point out in their article in *Second Thoughts on Outsourcing For the Army*, that the army “must not be lulled into thinking that outsourcing defense systems to commercial interests alone will be the panacea for all our budgetary needs.”¹¹⁹ By outsourcing critical functions, the military is putting at risk that capability. The level of contracting out functions is such concern that the lawmakers of the United States are worried that the military has gone too far. This analysis has demonstrated that the military has assumed too much risk and placed in jeopardy mission success at all levels of war. However, there are actions the military can do to mitigate the assumed risk.

The future with contractors on the battlefield is extremely risky and its outcome is far from certain. John Scharr, Futurist, sums it up by saying that the “future is not some place we are going, but one we are creating.”¹²⁰ Despite the historical presence of contractors on the battlefield and the current economic and political trends of outsourcing, there remains considerable resistance to the contracting of services. Overcoming this resistance is paramount to successfully employing contractors on the battlefield in the 21st century. The process of overcoming resistance and mitigating risk require a focus on leadership, planning, education and doctrine.

Risk according to Webster’s Dictionary is “a chance of suffering or encountering harm or loss.”¹²¹ Inherent within the job description of the United States military is going into harms way to win our nation’s wars to defend our nation’s interests. However, just because that is the mission does not mean that the military should enter the situation

¹¹⁹ COL John C. Deal and James H. Ward, "Second Thoughts on Outsourcing for the Army," *Army Magazine*, May 2001, 54.

¹²⁰ QuoteGallery, *Quote Gallery* [Internet] (January 1, 2001, accessed May 2, 2001); available from www.quotegallery.com.

without attempting to lessen the risk and ensure greater success. The United States military in its reduced state can no longer afford to lead with its chin. As an example, strategically, the military understands the inherent risk of maintaining a two MTW strategy and having only enough mobility assets to support one MTW and nothing else.¹²² The DoD mitigates that risk by establishing agreements like CRAF and VISA in peacetime to ensure the required capability exists in time of need. Mitigating risk is essential and is the military's effort to create the future.

Leadership is critical to the overall success of any operation. How leaders develop the team affects how well the team works together. Contractors are not assigned to the unit, they do not perform physical training with the unit, they do not live in the barracks, and they wear civilian clothes. There is a natural bias against contractors. They are not part of the team. This is the underlying theme of many lessons learned and articles written on the subject of contractors on the battlefield. The leader sets the tone for the organization as a whole. Instead of trying to control everything through laws, and threats of punitive actions, endeavor to establish a habitual relationship with the contractor. Exercise indirect control of contractor personnel through contract terms and conditions. Accept the contractor's employee as part of the team. Invite them to the unit functions; recognize their efforts just as soldiers receive recognition. Make the contractors part of the team and they will respond. Soldiers do not bond with their comrades because of the UCMJ, they bond because they identify with the individuals in the unit. The leader must set the tone and build the team not break it down.

¹²¹ *Webster's Revised Unabridged Dictionary* (Plainfield, NJ: MICRA, Inc., 1998).

¹²² Robertson.

Building a team requires careful planning, cooperation, and effort. Including a “deployment clause” in systems contracts before awarding the contract is essential. It establishes a paper habitual relationship and sets the stage for the role of the leadership. At home station, include contractor support when planning for operations. Failure to plan for contractors upfront will create problems getting to the fight. It is too late when the unit arrives in theater to realize that contractor support is lacking because of a deficient plan. Failure to properly plan contractors can result in excess costs, like the first year of Bosnia, or worse by lacking critical support for key weapons systems. Bring the principle contractor’s representative in early in the operational planning process. This will help in alleviating many unexpected problems. Although contractors on the battlefield are not new, experience and doctrine are limited, resulting in an ad hoc coordination for contracting support.

The inexperience of Army contract supervisors and commanders often results in confusion. This confusion is a product of a lack of education and training. Given the likely prospect of heavy civilian contractor involvement on future battlefields, there needs to be greater emphasis placed on the development and placement of contracting experts throughout the Army.¹²³ Familiarize commanders and junior leaders (officer and NCO) on the details of contracts, help them understand what is okay and what is not, also help to reduce the cloud of confusion that surrounds a contract. When these leaders gain a greater understanding, they will better utilize contractor personnel and bring them on board as a team member rather than a straphanger.

Mentioned earlier, doctrine is severely deficient. “Outstanding performance on the tactical or operational level causes political and military leaders to emphasize short-

run success on the battlefield while neglecting the development of a coherent long-range strategy. Yet, when a strategy is not consciously formulated, it emerges by default. Instead of being the driving force in war, strategy becomes a mere by-product or afterthought. In prolonged wars, this is a recipe for disaster, since even extraordinary tactical and operational successes may not add up to a winning strategy.”¹²⁴ This creates the potential for stovepipe support systems on the battlefield, which can add to the confusion and discontent for contractors on the battlefield, and reduces the flexibility the commander has in theater. The United States Army through CASCOT is developing doctrine for the Army. The doctrine must assist in removing any unintended burden on Army commanders and units at the operational and tactical levels during operational situations. However, the SECDEF by Title 10, USC, must determine the core logistics capability of the services.

This requirement is not new, but the enforcement of this USC has become critical for the successful accomplishment of the mission. The role of contractors on the battlefield is increasing and their status is being called into question as the United States military outsources more functions. Establishing core logistics capabilities must happen at each level of war – strategic, operational, and tactical. Different critical logistics activities happen at each level. Before establishing the capability, the United States Army must develop the core logistical requirements for the different levels. The mix of active, reserve, government-civilian and contractors varies based on METT-TC. In Bosnia, contractors provided a greater portion of the core logistics capability, where in the Gulf War the uniformed soldiers provided more of the core logistics capability.

¹²³ Shrader, 12-13.

Department of the Army must establish a recommended core logistics requirement and associated capability at each level of war. This recommendation should provide some guidelines for Domestic Support, SASO and MTW scenarios.¹²⁵

Since World War II, contractors made positive contributions in supporting the United States Army in the field and have thus become an indispensable part of the Army's warfighting and peacekeeping capability. The presence of contractors is a forgone conclusion. The real question is how the military decides to embrace the increased mission reliance on contractors and create the future. Having them provide core logistics capabilities is tenacious, especially when mission failure causes unnecessary loss of life and potentially the loss of United States commitment. Understanding the risk, the military can mitigate the risks through proper leadership, planning, training, and doctrine. The growing presence of contractors on the battlefield can be a source of strength for the men and women of our Armed Forces.

¹²⁴ Michael I. Handel, *Masters of War : Classical Strategic Thought*, 3rd ed. (London ; Portland, OR: Frank Cass, 2001), 354.

¹²⁵ Need to consider Domestic Support Operations

(continued from previous footnote) – organizations like Federal Emergency Management Agency (FEMA) depends on military equipment and personnel as a safety net for the support of U.S. citizens involved in natural or manmade disasters.

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